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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/074,765	BANERJI ET AL.	
	Examiner	Art Unit	
	TUNG VO	2486	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05/27/2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Decision by the BPAI

1. The previous rejections of claims 1-23 have been reversed by the Board of Patent Appeals and Interferences on 05/24/2011, therefore, prosecution of the above claims is reopened. A rejection for the claims on new grounds follows below.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 16 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, as it does not fall under any of the four statutory classes of inventions.

Claim 16 recites "A computer readable storage medium bearing instructions…". The specification [0053] indicates "The term "computer-readable medium" as used herein refers to any medium that participates in providing instructions to the processor 604 for execution. Common forms of computer-readable media include, for example, a floppy disk, a flexible disk, hard disk, magnetic tape, any other magnetic medium, a CD-ROM, CDRW, DVD, any other optical medium, punch cards, paper tape, optical mark sheets, any other physical medium with patterns of holes or other optically recognizable indicia, a RAM, a PROM, and EPROM, a FLASH-EPROM, any other memory chip or cartridge, **a carrier wave**, or **any other medium** from which a computer can read.

Therefore, the medium recited in claim 16 includes a signal and rejected as being non-statutory under 35 U.S.C. 101.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 13, 14, 16/1, 16/2, 16/13, 16/14 and 17-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Gonzales et al. (US 5,414,469).

Re claim 1, Gonzales discloses a method of compressing video (figs. 11, 12a, 12b, 13a, and 13b), comprising:

grouping video frames that are only between consecutive I-frames into a video data set (Figure 5; column 3, lines 35-49; column 4, lines 16-31; figure 11. The digital video input in figure 11 contains a group of pictures depicted in figure 5 which is comprised of two consecutive I-frames and a set of P-frames and B-frames between the consecutive I-frames. The video frames between the two consecutive I-frames are grouped as "BBP BBP BB" which is considered grouping video frames into a video data set ("BBP" or "BB"), i.e., a higher level of video data set. The group of pictures as shown in figure 5 has a distance between I pictures as N=9 and a distance between P-pictures as M=3. It is further disclosed that the distances N and M do not have to be constant over an entire sequence, which means the N and M that can be variable distances for grouping video frames (column 4, lines 25-38). Consequently, each individual P-frame or B-frame is also considered as a video data set, i.e., a lower level of video data set.);

splitting the video data set into a plurality of homogeneous files (figures 1-4, 6, 11 and 12; column 2, line 49 through column 3, line 34). Please note the conventional MPEG-1 video

layered structure depicted in figures 1-4 and 6. A video frame (A video data set) is split into slices (Plurality of macroblocks), macroblocks (A matrix of 16x16 pixels) and blocks (A matrix of 8x8 pixels). These layers are considered as a plurality of homogeneous files. Gonzales discloses further splitting of a video data set to lower level homogeneous files as follows:

The full resolution macroblock in an I or a P or a B frame is further decomposed into the 8x8 Y1, 8x8 Y2, 8x8Y3, 8x8Y4, 8x8Cb, and 8x8Cr blocks, wherein each of these blocks of 8x8 pixels are also considered as a plurality of homogeneous files; the full resolution 8x8 blocks are further split into 4x4Y1, 4x4Y2, 4x4Y3, 4x4Y4, 4x4Cb, and 4x4Cr blocks of homogeneous files as depicted in fig. 6.

Furthermore, Transform Unit of fig. 11, transforms 8x8, 4x4, 2x2 blocks of pixels to d(8x8), d(4x4) and d(2x2) DCT transformed blocks as depicted in figure 11, which is considered as a plurality homogeneous files; and

individually compressing (Hierarchical Prediction Unit and Multiplexor and Entropy Coding Unit of fig. 11; q (8x8), q(4x4), and q(2x2) of fig. 13a) each of the homogeneous files (e.g. q(8x8) is compressed by Entropy Coding Unit of fig. 11).

Re claim 2, Gonzales further discloses a method according to claim 1, wherein the video frames include P-frames and B-frames (M=3, BBP BBP BB pictures of fig. 5)

Re claim 13, Gonzales further discloses a method according to claim 1, wherein said homogeneous files have similar statistical properties (A video frame is transformed into blocks that have similar statistical properties, e.g. (8x8) blocks Y1, Y2, Y3, Y4, Cb and Cr in fig. 6).

Re claim 14, Gonzales further discloses a method according to claim 1, further comprising multiplexing the separate files into a bit stream (Multiplexor of fig. 11).

Re claim 16/1, 16/2, 16/13 and 16/14, Gonzales further discloses a computer-readable storage medium bearing instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods as in any of claims 1-2 and 13-15 (Column 2, Line 36 through column 3, line34. Note The MPEG-1 video standard specifies a coded representation of video for digital storage media, as set forth in ISO-IEC JTC1/SC2/WG11 MPEG CD-11172, MPEG Committee Draft, 1991).

Claims 17 and 18 disclose limitations which are presumed to invoke 35 U.S.C. 112, 6th paragraph, as said limitations meet said 3-prong analysis. As such, these claims will be treated accordingly.

Re claim 17, Gonzales discloses a video compression system (fig. 11), comprising:

means for grouping video frames that are only between consecutive I-frames into a video data set (MPEG-1 encoder, column 2; lines 33-65; figures 1-6. The digital video input in figure 11 contains a group of pictures depicted in figure 5 which is comprised of two consecutive I-frames and a set of P-frames and B-frames between the consecutive I-frames. The video frames between the two consecutive I-frames are grouped as "BBP BBP BB" which is considered grouping video frames into a video data set ("BBP" or "BB"), i.e., a higher level of video data set. The group of pictures as shown in figure 5 has a distance between I pictures as N=9 and a distance between P-pictures as M=3. It is further disclosed that the distances N and M do not have to be constant over an entire sequence, which means the N and M that can be variable distances for grouping video frames (column 4, lines 25-38). Consequently, each individual P-frame or B-frame is also considered as a video data set, i.e., a lower level of video data set.);

means for splitting the video data set into a plurality of homogeneous files (MPEG-1 encoder, column 2; lines 33-65; figures 1-6, 11 and 12. Please note the conventional MPEG-1

video layered structure depicted in figures 1-4, 6 11 and 12. A video frame (A video data set) is split into slices (Plurality of macroblocks), macroblocks (A matrix of 16x16 pixels) and blocks (A matrix of 8x8 pixels). These layers are considered as a plurality of homogeneous files. Transform Unit of fig. 11, transforms 8x8, 4x4, 2x2 blocks of pixels to d(8x8), d(4x4) and d(2x2) DCT transformed blocks as depicted in figure 11, which is also considered as a plurality homogeneous files); and

means for individually compressing each of the homogeneous files (Multiplexor and Entropy Coding Unit of fig. 12b).

Re claim 18 Gonzales further discloses a video compression system according to claim 17, further comprising: means for multiplexing the individually compressed files into a bit stream (Multiplexor of fig. 11).

Re claim 19, the claim recites the methodology for implementing the functions recited in claim 17 and is analyzed as previously discussed with respect to claim 17.

Re claim 20, Gonzales further discloses a method according to claim 19, wherein at least one of the individual data sequences contains information from each of the video frames that are only between the two consecutive I-frames (BBP BBP BB pictures of fig. 5).

Re claims 21 and 22, these claims recite the methodology for implementing the functions recited in claims 17 and 20, and are analyzed as previously discussed with respect to claims 17 and 20.

Re claim 23, the claim recites the same limitation recited in claim 18 and is analyzed as previously discussed with respect to claim 18.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3 and 16/3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US 5,414,469) in view of Niihara (US 6,256,344) and in view of Tahara et al. (US 5,805,225).

Re claim 3, Gonzales discloses said splitting video data (Transform Unit of fig. 11) and wherein said splitting includes mode information of the video data set (e.g. MCP (16x16), MCP(8x8), and MCP(4x4) of fig. 12b, note there are three kinds of motion compensation which may be applied to MB's: forward, backward, and interpolative. The encoder (fig. 11) must select one of these modes and motion components (Motion Estimation 16x16 of fig. 12b).

However, Gonzales does not disclose storing mode information of the video data set and motion components in separate files.

Niihara teaches storing mode information of the video data set and motion components (5 of fig. 2, see the abstract, col. 2, lines 47-56).

Therefore, taking the teachings of Gonzales and Niihara as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the step of storing the mode information and motion components as taught by Niihara into the encoder of Gonzales for the same purpose of run-length coding the transformed, quantized video data set that retrieves from the separate

files. Doing so would provide a quantization process that reduces the magnitude or number of bits of each quantized word and the coder circuit to implement coding in an efficient manner.

The combined teachings of Gonzales and Niihara do not disclose storing mode information of the video data set and motion components in separate files.

Tahara teaches storing split video data sets in separate files (51a, 51b, 51c, and 51 of fig. 6).

Taking the teachings of Gonzales, Niihara, and Tahara as a whole, it would have been obvious to one of ordinary skill in the art to modify the teachings of Tahara into the combined encoder of Gonzales and Niihara for storing the mode and components in separate files so that the encoder performs encoding and decoding more efficiency.

Re claims 16/3, Gonzales further discloses a computer-readable storage medium bearing instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods as claimed (note The MPEG-1 video standard specifies a coded representation of video for digital storage media, as set forth in ISO-IEC JTC1/SC2/WG11 MPEG CD-11172, MPEG Committee Draft, 1991).

5. Claims 4 and 16/4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US 5,414,469) in view of Yamauchi (US 5,729,302).

Re claim 4, Gonzales discloses the components of the video set in figure 6 but fails to teach storing horizontal components of the video data set and vertical components of the video data set in separate files as claimed.

However, Yamauchi teaches storing horizontal components of the video data set and vertical components of the video data set in separate files (5 of fig. 4, the memory 5 is for storing the vertical vector Vy and the horizontal vector Vx).

Taking the teachings of Gonzales and Yamauchi as a whole, it would have been obvious to one of ordinary skill in the art to modify the teachings of Yamauchi into the compressing of Gonzales to provide an improved image processing system having an improved color encoder particularly suited for use in a T.V. system.

Re claim 16/4, Gonzales further discloses a computer-readable storage medium bearing instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods as claimed (note The MPEG-1 video standard specifies a coded representation of video for digital storage media, as set forth in ISO-IEC JTC1/SC2/WG11 MPEG CD-11172, MPEG Committee Draft, 1991).

6. Claims 5 and 16/5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US 5,414,469) in view of Tahara et al. (US 5,805,225).

Re claim 5, Gonzales does not particularly disclose storing B-frame components of the video data set and P-frame components of the video data set in separate files as claimed.

Tahara teaches storing B-frame components of the video data set and P-frame components of the video data set in separate files (51a, 51b, 51c, and 51 of fig. 6).

Taking the teachings of Gonzales and Tahara as a whole, it would have been obvious to one of ordinary skill in the art to modify the teachings of Tahara into the encoder of Gonzales for improving encoding and decoding efficiency.

Re claim 16/5, Gonzales further discloses a computer-readable storage medium bearing instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods as claimed (note The MPEG-1 video standard specifies a coded representation of video for digital storage media, as set forth in ISO-IEC JTC1/SC2/WG11 MPEG CD-11172, MPEG Committee Draft, 1991).

7. Claims 6 and 16/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US 5,414,469) in view of to claim 1 and in view of Sazzad (US 6,122,321) and further in view of Tahara et al. (US 5,805,225).

Re claim 6, Gonzales teaches splitting the video data set into a plurality of homogeneous B-frames as indicated in the rejection of claim 1. Gonzales further teaches the encoder for encoding the video sequence into the MPEG compliant transport stream using predicted frame information (MCP (16x16) of fig. 12b), and further discloses different modes of motion compensation for B-frames (column 5, lines 36-55). The teaching includes forward (e.g., mode 1), backward (e.g., mode 2), interpolative (e.g., mode 3), and direct mode, since previously processed, temporally subsequent reference p-frames can only be available for b-frames as depicted in figure 5 (e.g., mode 4).

Gonzales do not include storing mode 3 B-frame components of the video data set and mode 0, 1, and 2 B-frame components of the video data set in separate files as claimed.

However, Sazzad teaches storing B-frames with different modes of motion compensation in B-frame (Storage 435 in figure 4).

Taking the teachings of Gonzales and Sazzad as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of the prediction modes for B- frame

of Sazzad into the encoder of Gonzales to improve efficiency of encoding. Doing so would provide to a decoder a higher quality image.

The combined teachings of Gonzales and Sazzad do not disclose storing B-frames with different modes of motion compensation in separate files.

Tahara teaches storing split video data sets in separate files (51a, 51b, 51c, and 51 of fig. 6).

Taking the teachings of Gonzales, Sazzad and Tahara as a whole, it would have been obvious to one of ordinary skill in the art to modify the teachings of Tahara into the encoder of Gonzales and Sazzad for improved encoding and decoding efficiency.

Re claims 16/6, Gonzales further discloses a computer-readable storage medium bearing instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods as claimed (note The MPEG-1 video standard specifies a coded representation of video for digital storage media, as set forth in ISO-IEC JTC1/SC2/WG11 MPEG CD-11172, MPEG Committee Draft, 1991).

8. Claims 7 and 16/7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US 5,414,469) in view of to claim 1 and in view of Tahara et al. (US 6,560,282).

Re claim 7, Gonzales teaches the different color components of the video data set but not storing different color components of the video set in different files as claimed.

Tahara discloses a luminance-signal frame memory (15 of fig. 5) for storing the luminance signal and a color-difference-signal frame memory (16 of fig. 5) for storing the color-difference signal.

Taking the teachings of Ganzales and Tahara as whole, it would have been obvious to one of ordinary skill in the art to modify the teachings of Tahara into Gonzales to improve the quality of the picture in an encoding and decoding system.

Re claim 16/7, Gonzales further discloses a computer-readable storage medium bearing instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods as claimed (note The MPEG-1 video standard specifies a coded representation of video for digital storage media, as set forth in ISO-IEC JTC1/SC2/WG11 MPEG CD-11172, MPEG Committee Draft, 1991).

9. Claims 8 and 16/8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US 5,414,469) in view of Nickerson (US 5,926,222).

Re claim 8, Gonzales teaches the prediction algorithm is a simple one-to-one mapping of the properly scaled coefficients but fails to teach mapping negative values in one of the homogeneous files into positive values as claimed.

However, Nickerson teaches mapping negative values in one of the homogeneous files into positive values (fig. 9; note figure 9 maps each of the degrees of unquantized coefficients (i.e., from -55 to 160) to one of the different values (i.e., 0 to 19) corresponding to the degree of the quantized coefficient, (column 10, lines 31-38).

Taking the teachings of Gonzales and Nickerson as a whole, it would have been obvious to one of ordinary skill in the art to modify the mapping technique of Nickerson into the encoder of Ganzales to improve processing speed by reducing the number of times in which access must be made to the complete tables stored in off-chip memory.

Re claim 16/8, Gonzales further discloses a computer-readable storage medium bearing instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods as in any of claims 1-3, 7, and 11-15 (note The MPEG-1 video standard specifies a coded representation of video for digital storage media, as set forth in ISO-IEC JTC1/SC2/WG11 MPEG CD-11172, MPEG Committee Draft, 1991).

10. Claims 9, 10, 16/9 and 16/10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US 5,414,469) in view of Banerji (US 6,400,289).

Re claims 9 and 10, Gonzales teaches MPEG-1 algorithms encoding (fig. 11) but does not particularly teach applying a grammar based code and a YK algorithm as claimed.

However, Banerji teaches a system for performing lossless data compression and decompression using a grammar based code and a YK algorithm (col. 2, lines 20-37).

Therefore, taking the combined teachings of Gonzales and Banerji as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Banerji into the method of Gonzales to improve coding efficiency.

Re claims 16/9 and 16/10, Gonzales further discloses a computer-readable storage medium bearing instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods as claimed (note The MPEG-1 video standard specifies a coded representation of video for digital storage media, as set forth in ISO-IEC JTC1/SC2/WG11 MPEG CD-11172, MPEG Committee Draft, 1991).

11. Claims 11, 12, 16/11 and 16/12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US 5,414,469) in view of Lei (US 6,272,180).

Re claims 11 and 12, Gonzales further discloses a method according to claim 11, wherein said compressing includes performing a run-length encoding of bit encoded coefficients (Entropy Coding Unit of fig. 11) but fails particularly to teach wherein said compressing includes bit plane encoding quantized transform coefficients obtained from the video data set and encoding of bit encoded coefficients as claimed.

However, Lei teaches wherein said compressing includes bit plane encoding quantized transform coefficients obtained from the video data set and encoding of bit encoded coefficients (fig. 9; col. 6, lines 25-43).

Therefore, taking the combined teachings of Gonzales and Lei as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Lei into the method of Gonzales to improve coding efficiency and the computations for decompression may be reduced.

Re claim 16/11 and 16/12/11, Gonzales further discloses a computer-readable storage medium bearing instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods as claimed (note The MPEG-1 video standard specifies a coded representation of video for digital storage media, as set forth in ISO-IEC JTC1/SC2/WG11 MPEG CD-11172, MPEG Committee Draft, 1991).

12. Claims 15 and 16/15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US 5,414,469) in view of Kikuchi et al. (US 5,719,646).

Re claim 15, Gonzales further discloses the MPEG 1 standard but fails to disclose prefixing a corresponding header to each of the separate files, said header indicating a size of a corresponding separate file.

However, Kikuchi teaches prefixing a corresponding header to each of the separate files, said header indicating a size of a corresponding separate file (figure 4; column 6, lines 3 through column 7 (In the MPEG video standard, for example, a hierarchical structure of picture data has been determined as shown in FIG. 4. A sequence layer located at the highest level in hierarchy includes sequence headers and data of GOP (Group Of Pictures) layers. Each sequence header has information such as the size of pictures of that sequence and display period. The GOP layers are located at the level subordinate to the sequence layer in the hierarchy. Each GOP layer includes a GOP header and a picture layer. The GOP header includes time information from the head of the GOP sequence. The picture layer is located at the level subordinate to the GOP layer in the hierarchy. The picture layer includes a picture header and a slice layer. The picture header includes information indicating an order of that picture in the GOP and information indicating the picture type. The slice layer is located at the level subordinate to the picture layer in the hierarchy. The slice layer includes a slice header and a macro-block layer. As shown in FIG. 4, code "001" in the picture header indicates that the picture data in question is an I-picture data. Similarly, codes "010" and "011" in the picture header indicate that the picture data are P-picture data and I-picture data, respectively.).

Therefore, taking the combined teachings of Gonzales and Kikuchi as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Kikuchi into the method of Gonzales to improve coding efficiency and the computations for decompression may be reduced.

Re claim 16/15, Gonzales further discloses a computer-readable storage medium bearing instructions for compressing video, said instructions being arranged, upon execution by one or more processors, to perform the steps of the methods as claimed (note The MPEG-1 video

standard specifies a coded representation of video for digital storage media, as set forth in ISO-IEC JTC1/SC2/WG11 MPEG CD-11172, MPEG Committee Draft, 1991).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Liu et al. (US 6,731,685) discloses a method and apparatus for determining a bit rate need parameter in a statistical multiplexer.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUNG VO whose telephone number is (571)272-7340. The examiner can normally be reached on Monday-Wednesday, Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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